Students' Department

H. P. Baumann

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H. P. Baumann, *Editor*

New York C. P. A. Examination

The editor of this department has received a request to prepare solutions to problems No. 2 and No. 5 of the New York C. P. A. examinations of April, 1933.

Problem No. 2:

Following are statements of assets and liabilities as at December 31, 1932, and statements of income and expenses and surplus, for the year ended December 31, 1932, for Companies A, B, and C:

Statement of assets and liabilities
December 31, 1932

	Company A	Company B	Company C
Cash	$ 20,000.00	$ 15,000.00	$ 30,000.00
Accounts receivable	40,000.00	50,000.00	90,000.00
Inventories	75,000.00	60,000.00	110,000.00
Land	15,000.00	5,000.00	10,000.00
Buildings and equipment (net after deducting depreciation reserve)	160,000.00	90,000.00	230,000.00
Cost of stock of subsidiary	480,000.00	380,000.00	....
	$790,000.00	$600,000.00	$470,000.00
Accounts payable	$ 50,000.00	$ 20,000.00	$ 80,000.00
Capital stock	600,000.00	500,000.00	300,000.00
Surplus	140,000.00	80,000.00	90,000.00
	$790,000.00	$600,000.00	$470,000.00

Statement of income, expenses and surplus
for the year ended December 31, 1932

	Company A	Company B	Company C
Sales	$250,000.00	$200,000.00	$300,000.00
Cost of goods sold	200,000.00	175,000.00	270,000.00
	$ 50,000.00	$ 25,000.00	$ 30,000.00
Administrative and general expenses	15,000.00	5,000.00	5,000.00
	$ 35,000.00	$ 20,000.00	$ 25,000.00
Dividends received on stocks of subsidiaries	24,000.00	10,000.00	....
Miscellaneous other income	$ 5,000.00	$ 5,000.00	$ 15,000.00
Net profit for the year ended December 31, 1932	$ 64,000.00	$ 35,000.00	$ 40,000.00
Surplus, January 1, 1932	126,000.00	70,000.00	70,000.00
	$190,000.00	$105,000.00	$110,000.00
Less: dividends paid	50,000.00	25,000.00	20,000.00
Surplus, December 31, 1932	$140,000.00	$ 80,000.00	$ 90,000.00

Company A acquired 96 per cent. of the capital stock of Company B at the time of organization of the latter in 1922. The remaining 4 per cent. was acquired at that time by minority holders and held by them continuously through December 31, 1932.

As at the close of business June 30, 1932, Company B acquired 100 per cent. of the capital stock of Company C.

One-half of the net profit of Company C for the year 1932 was earned in the first six months of the year and one-half during the last six months.

There were no intercompany purchases or sales during 1932.

Depreciation and accrual entries have been made and no provision need be made for income tax liability.

Prepare a consolidated statement of assets and liabilities as at December 31, 1932, and a consolidated statement of income, expenses and surplus for the year ended December 31, 1932, suitable for inclusion in a report to the stockholders of Company A. These statements should show as distinguishable items the earnings and surplus of the group of companies that are applicable to the stockholders of Company A, and those applicable to minority interests.

Solution:

It is apparent after a careful reading of this problem that there is no goodwill or surplus arising from the consolidation. The problem states that Company A purchased 96 per cent. of the capital stock ($500,000) of Company B at the time that company was organized for $480,000. The book value of Company C at June 30, 1932, when Company B purchased its entire capital stock for $380,000 was:

Capital stock	$300,000
Surplus, January 1, 1932	70,000
Profits to June 30, 1932	20,000
Total	$390,000
Less: dividend paid	10,000
Book value at June 30, 1932	$380,000

The fact that Company B received only $10,000 in dividends during its period of ownership indicates that the remainder of the $20,000 of dividends paid by Company C were disbursed prior to June 30, 1932.

As Company B owns the entire capital stock of Company C, its share of the increase in the latter company's surplus account must be considered in ascertaining the minority interest of 4 per cent. If Company B followed the practice of recording in its investment account the earnings and the dividends of Company C, the investment account would show a balance of $390,000 instead of $380,000 at December 31, 1932. This increase of $10,000 in the investment account would result in a corresponding increase in the surplus so that the net worth of Company B would be $590,000 as shown on the following page.

Statement showing computation of minority interest in Company B at December 31, 1932

Capital stock of Company B		$500,000
Surplus of Company B	$80,000	
Add: increase in surplus account of Company C for the period from June 30, 1932, to December 31, 1932	10,000	90,000
Total book value		$590,000
Minority interest:		
Per cent		4%
Amount		$ 23,600

Having obtained the minority interest and the consolidated surplus as shown in Exhibit B, the candidate may now prepare the consolidated balance-sheet through the simple procedure of cross-adding the assets (exclusive of the investment accounts with the subsidiaries) and the accounts payable, and inserting the amounts of the minority interest, consolidated surplus, and the capital stock of the parent company.

Exhibit A

COMPANY A AND SUBSIDIARIES COMPANIES B AND C

Consolidated balance-sheet—December 31, 1932

Assets

Current assets:		
Cash	$ 65,000	
Accounts receivable	180,000	
Inventories	245,000	$ 490,000
Fixed assets:		
Land	$ 30,000	
Building and equipment (net after deducting depreciation reserve)	480,000	510,000
		$1,000,000

Liabilities and net worth

Accounts payable		$ 150,000
Minority interest: Company B (4%)		23,600
Net worth:		
Capital stock	$600,000	
Surplus	226,400	826,400
		$1,000,000

Exhibit B

Company A and Subsidiaries Companies B and C

Consolidated statement of income, expenses, and surplus for the year ended December 31, 1932

	Company A	Company B	Company C	Total	Eliminations	Consolidated interest: Stockholders of Company A	Consolidated interest: Minority
Sales	$250,000	$200,000	$300,000	$750,000			
Cost of goods sold	200,000	175,000	270,000	645,000			
Gross profit on sales	$ 50,000	$ 25,000	$ 30,000	$105,000			
Administrative and general expenses	15,000	5,000	5,000	25,000			
Net profit from operations	$ 35,000	$ 20,000	$ 25,000	$ 80,000			
Miscellaneous other income	5,000	5,000	15,000	25,000			
Net profit for the year	$ 40,000	$ 25,000	$ 40,000	$105,000	(a) $ 20,000	$ 83,200	$ 1,800
Surplus, January 1, 1932	126,000	70.000	70,000	266,000	(a) 70,000	193,200	2,800
Dividends received	24,000	10,000	......	34,000	(b) 34,000	......	......
Total	$190,000	$105,000	$110,000	$405,000	$124,000	$276,400	$4,600
Dividends paid	50,000	25,000	20,000	95,000	(a) 10,000 (b) 34,000	50,000	1,000
Surplus, December 31, 1932	$140,000	$ 80,000	$ 90,000	$310,000	$ 80,000	$226,400	$3,600

(a) To eliminate the surplus of Company C at the date of acquisition.

As the income and expenses were not segregated in the statement of the problem, the total income and expense reflects the operations of the consolidation plus the operation of Company C for the first six months of the year.

Thus the 4 per cent. minority interest in net profits is based on $25,000 of Company B and $20,000 ($40,000—(a) $20,000) of Company C; the 4 per cent. minority interest in opening surplus is based on $70,000 of Company B.

(b) To eliminate the $34,000 of inter-company dividends which did not affect the consolidated surplus, and shows the actual payment of dividends to outsiders.

Problem No. 5:

For a number of years the Buffalo Textile Co. has conducted a wool yarn business. In addition to this business, a year or two ago they purchased a large mill and conducted a milling business. They built a power plant to produce their own power for both plants.

An examination of the minute book shows that a vote of the entire stock of the company authorizes the sale of the entire assets of the company used in the grist-mill operation and the power plant to the Arkport Milling & Storage Company as of October 31, 1932, for $20,000 par value of the common stock of the Arkport Milling & Storage Company (being the entire stock of this company).

The inventories of corn, wheat and produce on hand October 31, 1932, are to be sold to the new company at the inventory price.

You have a verified trial balance as given below and are required to prepare:

(a) Operating statements by departments for the fiscal year ended October 31, 1932, before giving effect to the above resolution.

(b) Separate balance-sheets of the Buffalo Textile Co. and of the Arkport Storage & Milling Company, as of October 31, 1932, after giving effect to the provisions of the resolution.

Trial balance as at October 31, 1932

	Debit	Credit
Wool mill plant land	$ 2,000.00	
Wool mill plant buildings	7,500.00	
Wool mill machinery	16,500.00	
Wool mill furniture and fixtures	350.00	
Wool mill employees' cottages	4,200.00	
Grist mill land	300.00	
Grist mill buildings	2,000.00	
Grist mill machinery	4,000.00	
Power plant land and riparian rights	1,000.00	
Power plant dam	4,000.00	
Power plant machinery	4,000.00	
Power lines and transformers	1,000.00	
Wool yarn inventory October 31, 1931 (23,500 lbs.)	13,000.00	
Wool yarn sales 1931–1932 (292,500 lbs.)		$146,250.00
Waste, bagging and ties sales, 1931–1932		1,200.00
Grist mill products sales, 1931–1932		17,500.00
Power sales to the outsiders		75.00
Storage fees income		5,250.00
Wool inventory October 31, 1931 (35,220 lbs.)	7,255.00	
Wool purchases, 1931–1932 (306,000 lbs.)	76,500.00	
Wool mill labor	36,000.00	
Wool mill superintendent	600.00	
Wool mill repairs and supplies	7,400.00	
Wool mill insurance	1,200.00	
Wool mill taxes	500.00	
Corn and wheat inventory, October 31, 1931	700.00	
Corn and wheat purchases, 1931–1932	11,800.00	
Grist mill and storage labor	2,000.00	
Grist mill miller	300.00	
Grist mill repairs and supplies	1,200.00	
Grist mill insurance	600.00	
Grist mill taxes	200.00	
Power plant superintendent and helpers	550.00	
Power plant and line repairs	300.00	
Power plant insurance	250.00	
Power plant taxes	100.00	
Repairs account lightning damage to power plant and line July 15, 1932 (no storm insurance)	400.00	
Officers' salaries	1,500.00	
General office expense	2,000.00	

	Annual Rate	Debit	Credit
Interest paid		$ 300.00	
Bills payable			$ 6,350.00
Accounts payable			2,500.00
Accounts receivable		7,300.00	
Cash		6,980.00	
Depreciation reserves:			
Power plant dam	(5%)		600.00
Power plant and machinery	(10%)		300.00
Wool mill plant buildings	(3%)		1,500.00
Wool mill machinery	(5%)		5,000.00
Wool mill employees' cottages	(5%)		1,000.00
Wool mill furniture and fixtures	(10%)		200.00
Grist mill buildings	(3%)		180.00
Grist mill machinery	(5%)		600.00
Capital stock			20,000.00
Surplus			17,280.00
		$225,785.00	$225,785.00

Inventories:
  Raw wool, 45,000 lbs.
    (Market October 31, 1932, 28.5 cents)
  Wool yarns, 1,500 lbs. at 65 cents (current market, 70 cents)
  Corn, wheat and grist mill products, $750,000.
    (Market price as far as ascertainable)
  Unexpired insurance:
    Wool mill, $450.00
    Grist mill, $250.00
    Power plant, $100.00
  Power cost to be divided 80% wool mill, 20% grist mill, this being actual proportion used by each.

Solution:

Comments:

1. No depreciation was provided on power lines and transformers, because none appears to have been provided in the past, and no rate is furnished. Power lines and transformers do not ordinarily come under the classification of power plant and machinery (the phrase "power plant and line" appears twice in the trial balance), and no specific depreciation reserve is on the books for the lines. The company may be charging all power line and transformer maintenance directly to expense, and providing no depreciation on the theory that the maintenance makes good the depreciation. The expense "power plant and line repairs," of $300 (with plant of $4,000 and lines of $1,000) is large enough to permit this interpretation.

2. The power plant repairs occasioned by lightning damage are not an ordinary expense, and therefore have not been taken into consideration in arriving at the cost of power, even though the storm insurance premium would have been considered an element of cost.

3. No basis is given for the valuation of 65 cents a pound placed on the closing inventory of wool yarn. While this valuation of the company's finished product is lower than market (70 cents) it is higher than the average selling price for the year (50 cents) and the average cost of yarn manufactured during the year (approximately 44 cents).

It will be noted that the opening inventory of wool yarn was priced at 55+ cents per pound, which appears to be greater than the selling price at that date (the average selling price of yarn for the year was 50 cents per pound, and the raw wool rose from about 20 cents per pound in the opening inventory to a market value of 28.5 cents at the end of the year, apparently indicating an upward trend in price during the year). But this fact alone does not justify the valuation of the closing inventory at the stated figure of 65 cents, as the opening inventory may have been valued incorrectly.

This solution values the inventory at average cost, this being the most correct on the basis of the information available.

The raw wool inventory is valued at average purchase cost.

4. The inventories of grist mill products are treated as having been sold to the new company on open account, a transaction separate from the sale of assets for stock. While the third paragraph of the problem might have been intended merely as an elaboration of the terms of sale previously recited, the inventories would not normally come under the heading of "assets used in the grist mill operations."

From the standpoint of the Arkport Company, inclusion of the inventories as a part of the consideration received for the stock would place a lower valuation upon goodwill (or stock discount).

Schedule 1

BUFFALO TEXTILE CO.

Statement of cost of power
for the year ended October 31, 1932

Expenses:		
Power plant superintendent and helpers		$ 550.00
Power plant and line repairs		300.00
Insurance		150.00
Taxes		100.00
Depreciation:		
Dam	$200.00	
Plant machinery	400.00	600.00
Total		$1,700.00
Less: sales to outsiders		75.00
Cost of power		$1,625.00
Distributed as follows:		
Wool mill—80%		$1,300.00
Grist mill—20%		325.00
Total		$1,625.00

Exhibit A

BUFFALO TEXTILE CO.

Statement of cost of sales
for the year ended October 31, 1932

	Wool mill	Grist mill	Total
Materials:			
Opening inventory	$ 7,255.00	$ 700.00	$ 7,955.00
Purchases	76,500.00	11,800.00	88,300.00
Total	$ 83,755.00	$12,500.00	$ 96,255.00
Closing inventory	11,250.00	....	11,250.00
Cost of materials	$ 72,505.00	$12,500.00	$ 85,005.00
Labor	$ 36,000.00	$ 2,000.00	$ 38,000.00
Manufacturing expenses:			
Superintendence	$ 600.00	$ 300.00	$ 900.00
Power	1,300.00	325.00	1,625.00
Repairs and supplies	7,400.00	1,200.00	8,600.00
Insurance	750.00	350.00	1,100.00
Taxes	500.00	200.00	700.00
Depreciation:			
Buildings	225.00	60.00	285.00
Employees' cottages	210.00	......	210.00
Machinery	825.00	200.00	1,025.00
Furniture and fixtures	35.00	......	35.00
Total manufacturing expenses	$ 11,845.00	$ 2,635.00	$ 14,480.00
Total	$120,350.00	$17,135.00	$137,485.00
Less: sale of waste, bagging and ties	1,200.00	......	1,200.00
Cost of goods manufactured	$119,150.00	$17,135.00	$136,285.00
Variation in inventory of finished goods:			
Opening	$ 13,000.00	$	$ 13,000.00
Closing	660.00	750.00	1,410.00
Add: decrease	$ 12,340.00	$ 750.00*	$ 11,590.00
Cost of sales	$131,490.00	$16,385.00	$147,875.00

* Red.

Exhibit B

Buffalo Textile Co.

Statement of profit and loss
for the year ended October 31, 1932

	Wool mill	Grist mill	Total
Sales and storage fees	$146,250.00	$22,750.00	$169,000.00
Cost of sales	131,490.00	16,385.00	147,875.00
Gross profit on sales	$ 14,760.00	$ 6,365.00	$ 21,125.00
Expenses:			
Officers' salaries			$ 1,500.00
General office expense			2,000.00
Total expenses			$ 3,500.00
Net profit from operations			$ 17,625.00
Other expenses:			
Interest			$ 300.00
Repairs of lightning damage			400.00
Total other expenses			$ 700.00
Net profit for the year (before provision for income tax)			$ 16,925.00

Exhibit C

BUFFALO TEXTILE CO.
Balance-sheet
October 31, 1932

Assets

Current assets:			
Cash		$ 6,980.00	
Accounts receivable		7,300.00	
Due from Arkport Storage and Milling Company		750.00	
Inventories (at cost):			
Wool yarn	$ 660.00		
Wool	11,250.00	11,910.00	
Total current assets			$26,940.00
Unexpired insurance premiums			450.00
Investment in Arkport Storage and Milling Company (at cost)			14,110.00

Fixed assets:

	Cost	Reserve for depreciation	Book value	
Land	$ 2,000.00	$	$ 2,000.00	
Buildings	7,500.00	1,725.00	5,775.00	
Machinery	16,500.00	5,825.00	10,675.00	
Furniture and fixtures	350.00	235.00	115.00	
Employees' cottages	4,200.00	1,210.00	2,990.00	
Total fixed Assets—net	$30,550.00	$ 8,995.00		21,555.00
				$63,055.00

Liabilities and net worth

Current liabilities:			
Accounts payable		$ 2,500.00	
Bills payable		6,350.00	
Total current liabilities			$ 8,850.00
Net worth:			
Capital stock		$20,000.00	
Surplus:			
Balance, October 31, 1931	$17,280.00		
Net profit for the year ended October 31, 1932	16,925.00	34,205.00	
Total net worth			54,205.00
			$63,055.00

Exhibit D

ARKPORT STORAGE & MILLING COMPANY

Balance-sheet
October 31, 1932

Assets

Current assets:				
Inventory of grain				$ 750.00
Prepaid insurance				350.00
Fixed assets:				
	Cost	Reserve for depreciation	Book value	
Grist mill:				
Land	$ 300.00	$	$ 300.00	
Buildings	2,000.00	240.00	1,760.00	
Machinery	4,000.00	800.00	3,200.00	
Power plant:				
Land and riparian rights	1,000.00	......	1,000.00	
Dam	4,000.00	800.00	3,200.00	
Machinery	4,000.00	700.00	3,300.00	
Power lines and transformers	1,000.00	......	1,000.00	
Total fixed Assets—net	$16,300.00	$2,540.00		13,760.00
Goodwill (or discount on stock)				5,890.00
				$20,750.00

Liabilities and net worth

Current liabilities:	
Due to Buffalo Textile Company	$ 750.00
Net worth:	
Capital stock	20,000.00
	$20,750.00